

09/21/00 11:30 PMA

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AMENDMENTS TO THE SPECIFICATION

Amend the paragraph beginning on Page 4, Line 13 as follows:

R1 A vehicular brake system is shown generally at 10 in FIG. 1. The brake system 10 includes a hydraulic control unit (HCU), indicated generally at 12, connected in fluid communication with a fluid supply source 14 and a plurality of wheel brake assemblies indicated generally at 16 (only one shown). A first pressure sensor 17 is [a] connected in fluid communication with each of the wheel brakes. The wheel brake assembly 16 is shown as a disc brake 16. Alternatively, the wheel brake assembly 16 may be a drum brake or any other known vehicular wheel brake assembly.

Amend the paragraph beginning on Page 18, Line 21 as follows:

Q2 A cross hole 516 is formed in the seat 502 in fluid communication with an axial bore 517 of the seat 502. An adapter 504 has a lower annular recess 506 that receives the seat 502 to retain the adapter 504 thereto. An inlet filter and an outlet annular filter are fitted about or into the seat 502. A bore 512 is formed through the adapter 504. A pin 510 is slidably disposed in the bore 512. A first ball 511 is pressed into a cavity 514 formed in a first end of the pin 510. A second ball 513 is pressed into a cavity 515 formed in the valve armature and connected to a second end of the pin 510. A first end of a spring 518 engages the [adapter 504] seat 502. A second end of the spring 518 engages a stop 519 mounted on the pin 510.

Amend the paragraph beginning on Page 20, Line 27 as follows:

Q3 Previously, a proportional solenoid valve with a high output stepped armature was proposed and disclosed and has been implemented. The dual stepped radial air gap increased the air gap area and the $\partial S / \partial x$ term in the axial force equation. This allowed the output force of the solenoid to be significantly increased without increasing the size of the solenoid. In this proposed new design, the flux ring tube section was extended upwards to form an external third lateral gap. This third lateral gap adds another $\partial S / \partial x$ term to the axial force equation, thereby further increasing the axial output force without increasing the size of the solenoid. This concept has been described with respect to a normally open proportional solenoid valve however this design can similarly [e] be adapted to a normally closed proportional solenoid valve. The use of this design concept creates a low cost or no cost method to further increase EHB output force or decrease current consumption and heating without changing solenoid size. Additionally, a flat force versus travel curve for a proportional control valve with triple lateral pole showed an increase of twelve percent (12%) of output force compared to a valve with a dual pole. Compounding this increase in force with the increase on force by using a double pole results in a total increase in force of output force of thirty-six percent (36%) over the output force of a single pole.
